Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : **CP-2017-12-25-03** **Date: 27-12-17**

Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.

Address : Project Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and Drains Balance cross roads of Chikkadinne in Attur Ward.No.03

Agency : Sri.B.P.Mahesh, S/o.B.L.Puttanna, No.58, BP Linganna Building, Chandramouleshwarahalli, Hunasamaranahalli, Bangalore-562157

Customer's Reference : EE(Project)/YnkZone/WO/88/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 25-12-17

Sample ID No : 2017-12-25-03/01

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6

Date of test : 25-12-17

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.45	–
2	Finess by Air permeablity method (m^2/kg, Min)	265.4	225m^2/kg, Min
3	Density (gm/cc)	3.12	–
4	Standard Consistency (%)	28.0%	Not specified
5	Initial Setting time	170 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1mm	Not more than 10 mm

Note:

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Authorized Signatory
Quality Manager

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-12-25-03** **Date: 22-01-18**
Customer	:	Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address	:	Project Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and Drains Balance cross roads of Chikkadinne in Attur Ward.No.03
Agency	:	Sri.B.P.Mahesh, S/o.B.L.Puttanna, No.58, BP Linganna Building, Chandramouleshwarahalli, Hunasamaranahalli, Bangalore-562157
Customer's Reference	:	EE(Project)/YnkZone/WO/88/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-12-17
Sample ID No	:	2017-12-25-03/01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	25-12-17

Compressive Strength

SLNo.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	27.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.5N/mm^2	Not less than 37 N/mm^2
3	28 Days	57.5N/mm^2	Not less than 53 N/mm^2

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-12-25-03** **Date: 28-12-17**
Customer	:	Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address	:	Project Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and Drains Balance cross roads of Chikkadinne in Attur Ward.No.03
Agency	:	Sri.B.P.Mahesh, S/o.B.L.Puttanna, No.58, BP Linganna Building, Chandramouleshwarahalli, Hunasamaranahalli, Bangalore-562157
Customer's Reference	:	EE(Project)/YnkZone/WO/88/2017-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	25-12-17
Sample ID No	:	2017-12-25-03/02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	25-12-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	232	232	1.5	98.5	90-100
3	20 mm	5334	5566	37.1	62.9	30-70
4	10 mm	4665	10231	68.2	31.8	10-35
5	4.75 mm	4355	14586	97.2	2.8	0-5
6	Pan	414	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-12-25-03** **Date: 28-12-17**

Sample ID No : 2017-12-25-03/02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	**12.4**	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	**11.7**	
3	Specific Gravity	**2.69**	_
4	Bulk Density(Loose) (Kg/l)	**1.49**	_
5	Bulk Density(Compacted) (Kg/l)	**1.54**	_
6	Water Absorption(%)	**0.24**	_

Note:

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-12-25-03** **Date: 28-12-17**
Customer	:	Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address	:	Project Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and Drains Balance cross roads of Chikkadinne in Attur Ward.No.03
Agency	:	Sri.B.P.Mahesh, S/o.B.L.Puttanna, No.58, BP Linganna Building, Chandramouleshwarahalli, Hunasamaranahalli, Bangalore-562157
Customer Reference	:	EE(Project)/YnkZone/WO/88/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-12-17
Sample ID No	:	2017-12-25-03/02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	25-12-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	248	248	5.0	95.0	90-100
3	10 mm	2654	2902	58.0	42.0	25-55
4	4.75 mm	1780	4682	93.6	6.4	0-10
5	Pan	318	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-12-25-03** **Date: 28-12-17**

Sample ID No : 2017-12-25-03/02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	**12.1**	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	**11.6**	
3	Specific Gravity	**2.68**	–
4	Bulk Density(Loose) (Kg/l)	**1.51**	–
5	Bulk Density(Compacted) (Kg/l)	**1.55**	–
6	Water Absorption(%)	**0.22**	–
7	Aggregate crushing Value(%)	**22.8**	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	**21.9**	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2017-12-25-03** **Date: 28-12-17**
Customer	:	Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address	:	Project Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and Drains Balance cross roads of Chikkadinne in Attur Ward.No.03
Agency	:	Sri.B.P.Mahesh, S/o.B.L.Puttanna, No.58, BP Linganna Building, Chandramouleshwarahalli, Hunasamaranahalli, Bangalore-562157
Customer's Reference	:	EE(Project)/YnkZone/WO/88/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-12-17
Sample ID No	:	2017-12-25-03/03
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	25-12-17
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	84	84	8.4	91.6	90-100	90-100	90-100	95-100
3	2.36 mm	144	228	22.8	77.2	60-95	75-100	85-100	95-100
4	1.18 mm	168	396	39.6	60.4	30-70	55-90	75-100	90-100
5	600 micron	179	575	57.5	42.5	15-34	35-59	60-79	80-100
6	300 micron	187	762	76.2	23.8	5-20	8-30	12-40	15-50
7	150 micron	157	919	91.9	8.1	0-10	0-10	0-10	0-15
8	Pan	81	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-12-25-03** **Date: 28-12-17**

Sample ID No : 2017-12-25-03/03

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.9	–
2	Specific Gravity	2.58	–
3	Material finer than 75 micron(%)	5.2	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Format No: CP/TF/01

TEST RESULTS OF STEEL

Lab ID	:	**CP-2017-12-25-03** **Date: 26-12-17**
Customer	:	Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address	:	Project Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and Drains Balance cross roads of Chikkadinne in Attur Ward.No.03
Agency	:	Sri.B.P.Mahesh, S/o.B.L.Puttanna, No.58, BP Linganna Building, Chandramouleshwarahalli, Hunasamaranahalli, Bangalore-562157
Customer's Reference	:	EE(Project)/YnkZone/WO/88/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-12-17
Sample ID No	:	2017-12-25-03/04
Sample Type	:	Indus
Reference to BIS codes	:	IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.
Date of test:	:	25-12-17

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	Indus	Fe500	8	0.394	545	662	20.0%	Satisfactory	Satisfactory
2	Indus	Fe500	10	0.618	566	685	20.0%	Satisfactory	Satisfactory

Note:

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